PARM SUMMIT

NAVY DATA ENVIRONMENT (NDE)/ POM 06 MODERNIZATION PLAN

8 JUNE 2004

Mr. Patrick Haney, SEA 04RP and
Mr. David White, PEO SHIPS

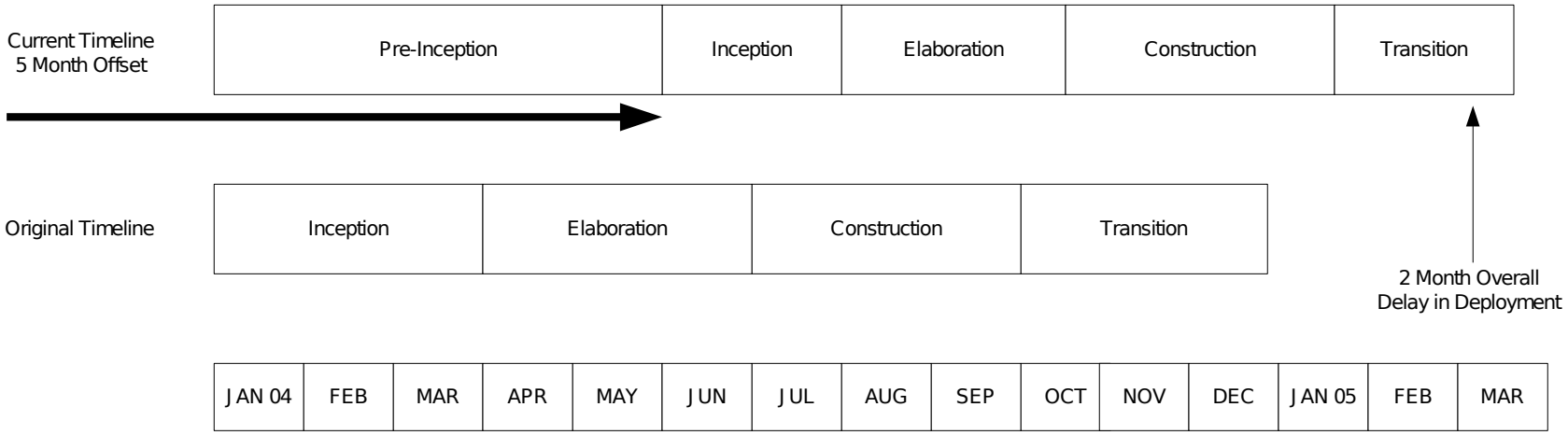
NDE Software Development Overview

- Project Objectives
  - To develop an enhancement to the Navy Data Environment (NDE) database by automating the SHIPMAIN CFT-4 logic flow path and business rules.
  - To apply the industry best practices of the Rational Unified Process (RUP) throughout the project.

NDE Software Development Overview

- Initial Conditions: Project Start – 5 Jan 04
  - Proposal Assumptions
    - Mature Process with Defined Business Rules
    - Available Subject Matter Experts (SMEs)
  - Reality
    - Poorly defined process with expanding scope
    - Insufficient business rules and inconsistent goals
    - Severe shortage of SMEs with knowledge of SHIPMAIN, the entitled process and specific process requirements
  - Offsite Workshops
    - Jump Start in refining goals and requirements

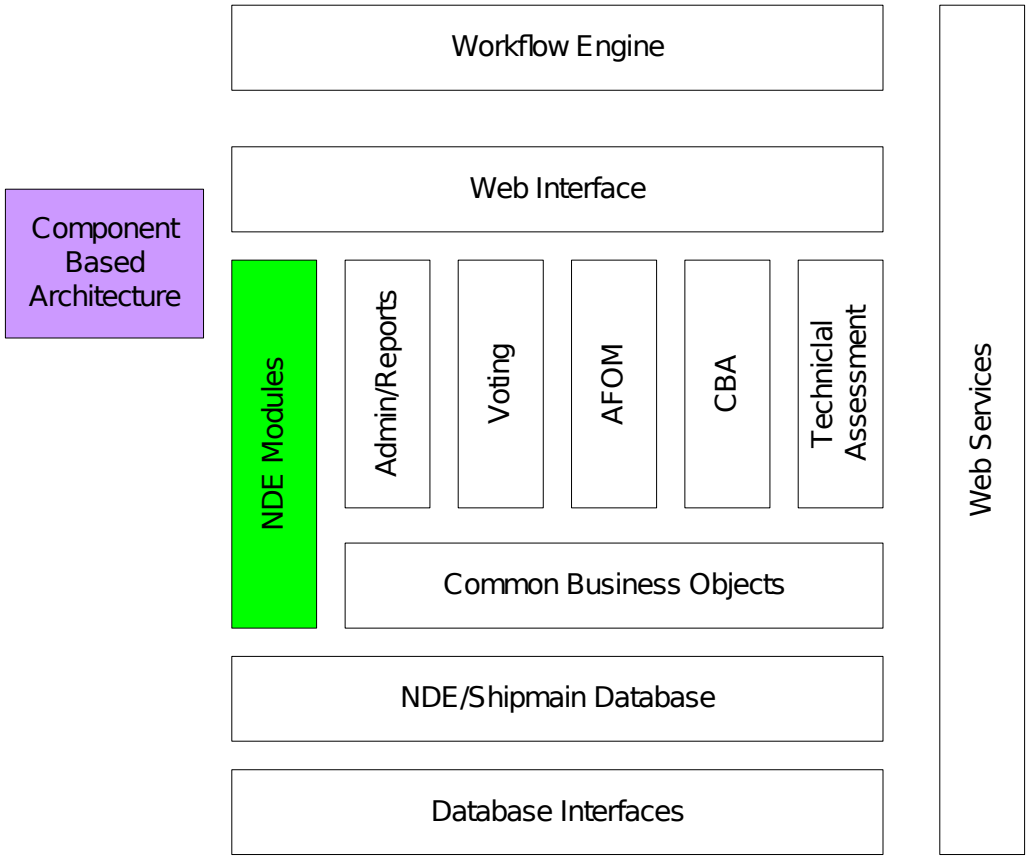
Software Development Plan



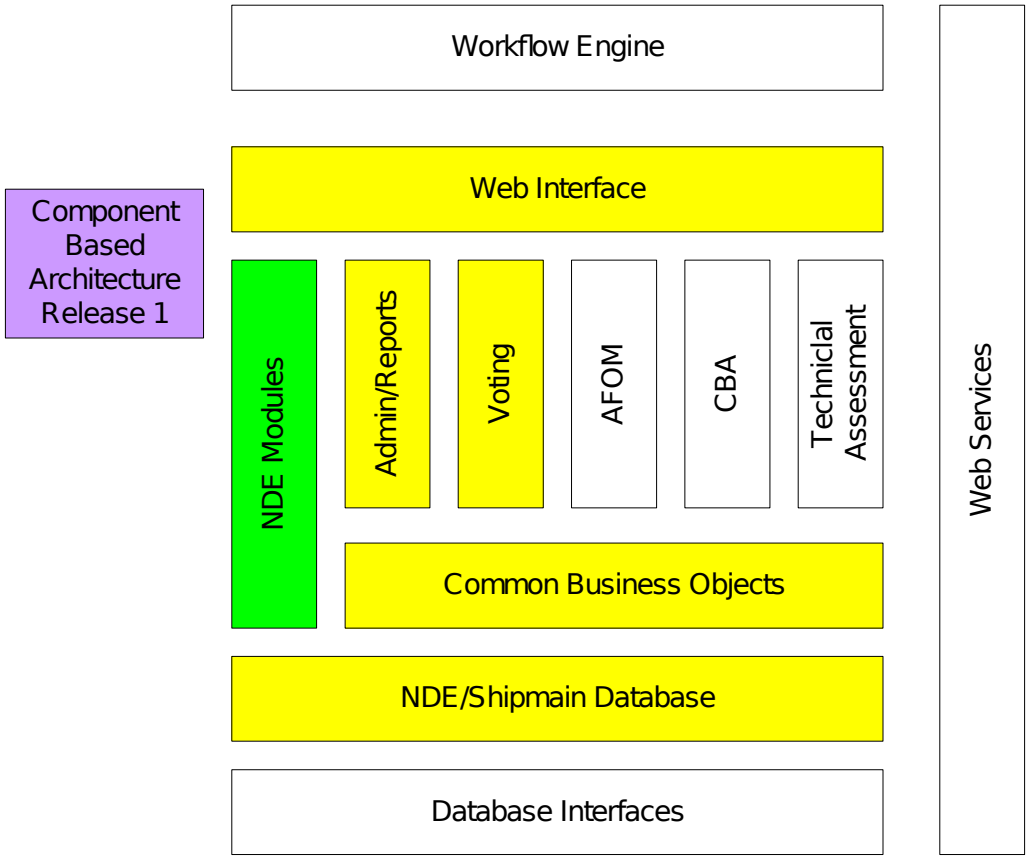
- Current activities are Pre-Inception Phase oriented
- Resumption of Inception Phase is contingent upon
  - Approved functional baseline of overall Process
  - Defined Business Rules
  - Availability Subject Matter Experts (SMEs) – Team Leads

Configuration Management of Process and Business Rules is Critical to Success

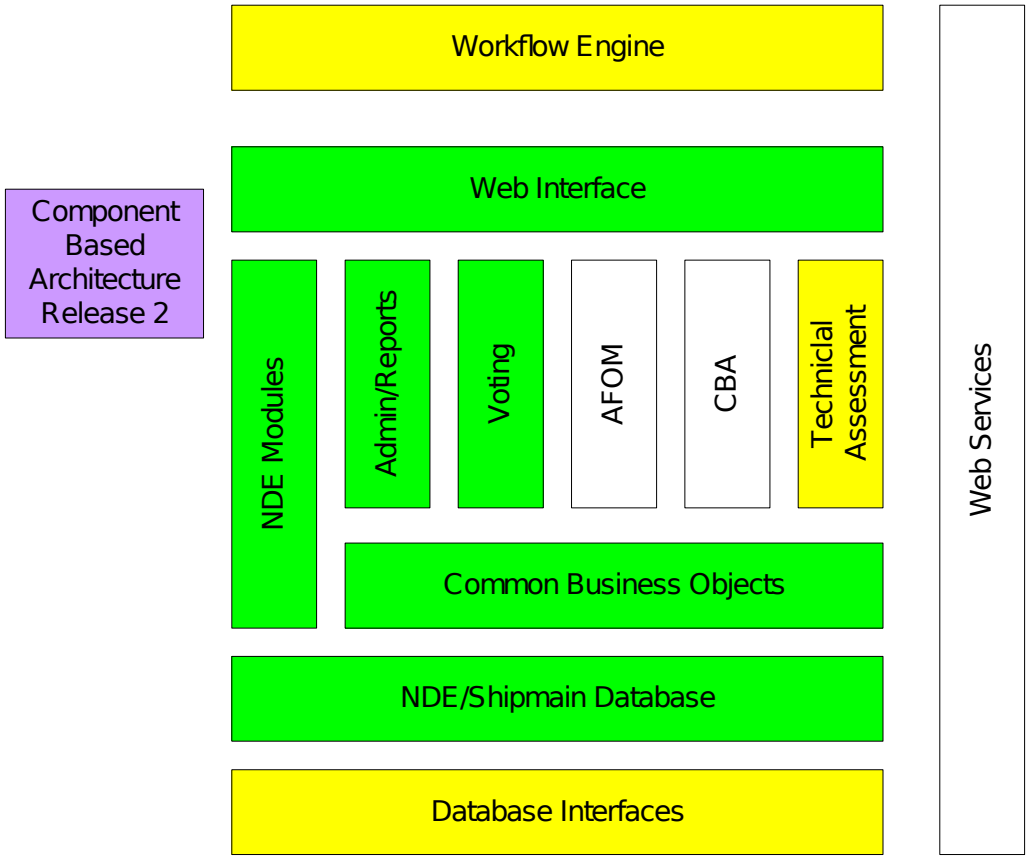
Component Based Architecture



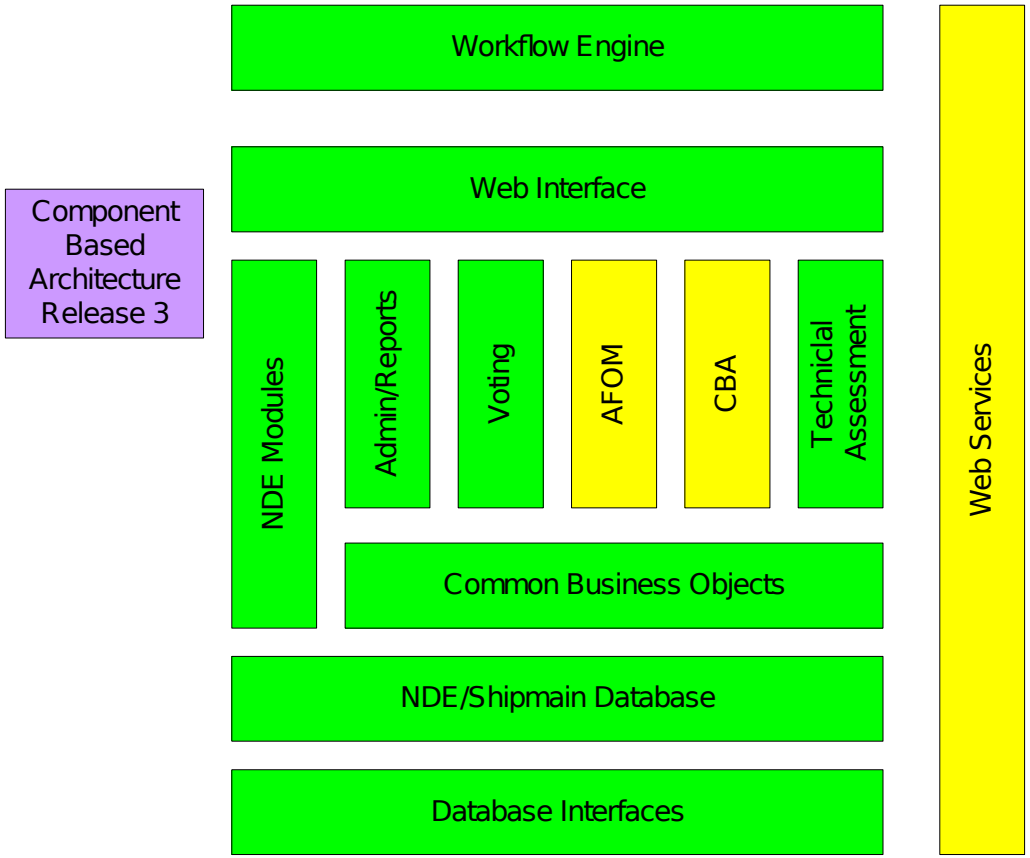
Component Based Architecture



Component Based Architecture



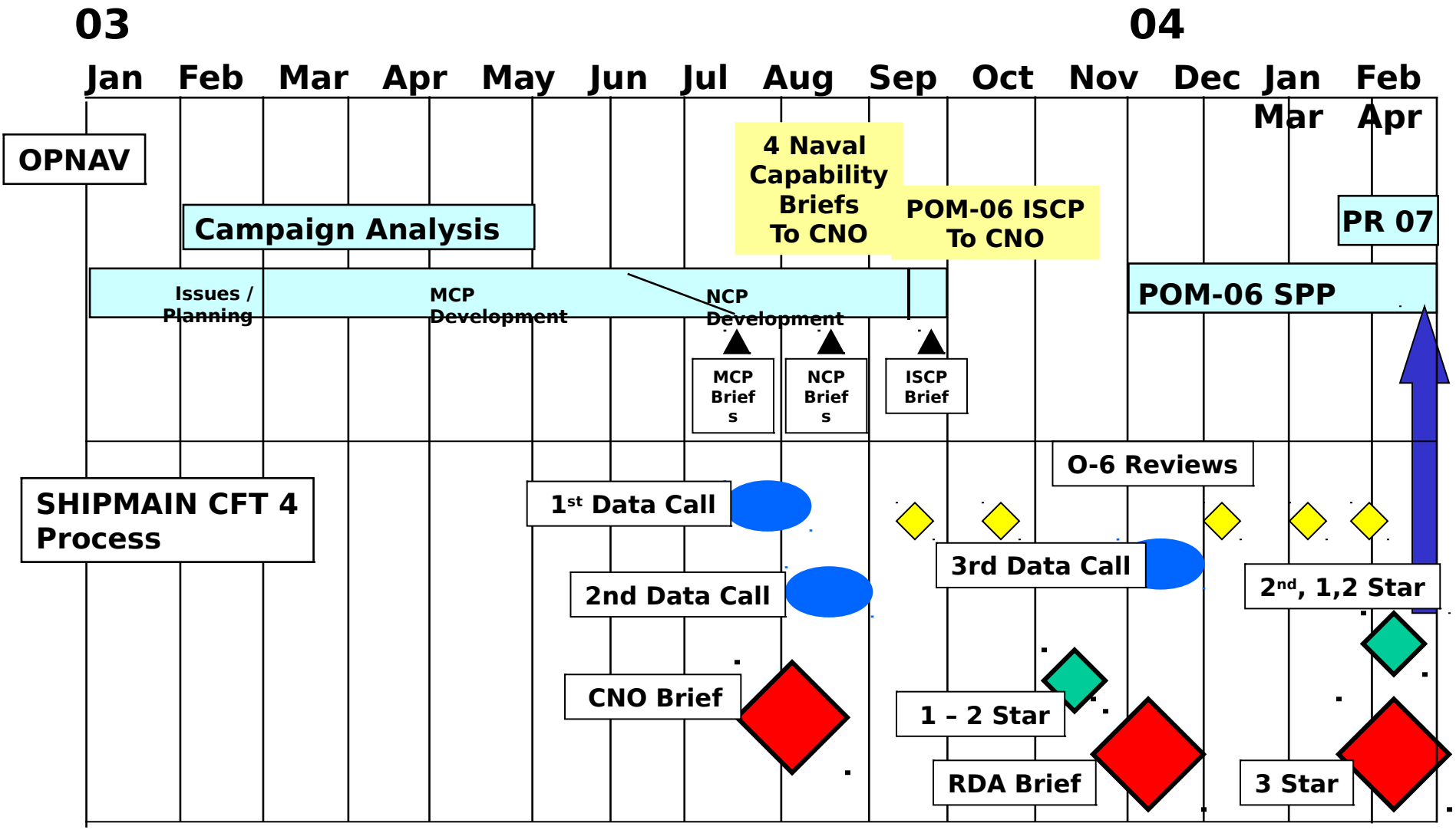
Component Based Architecture



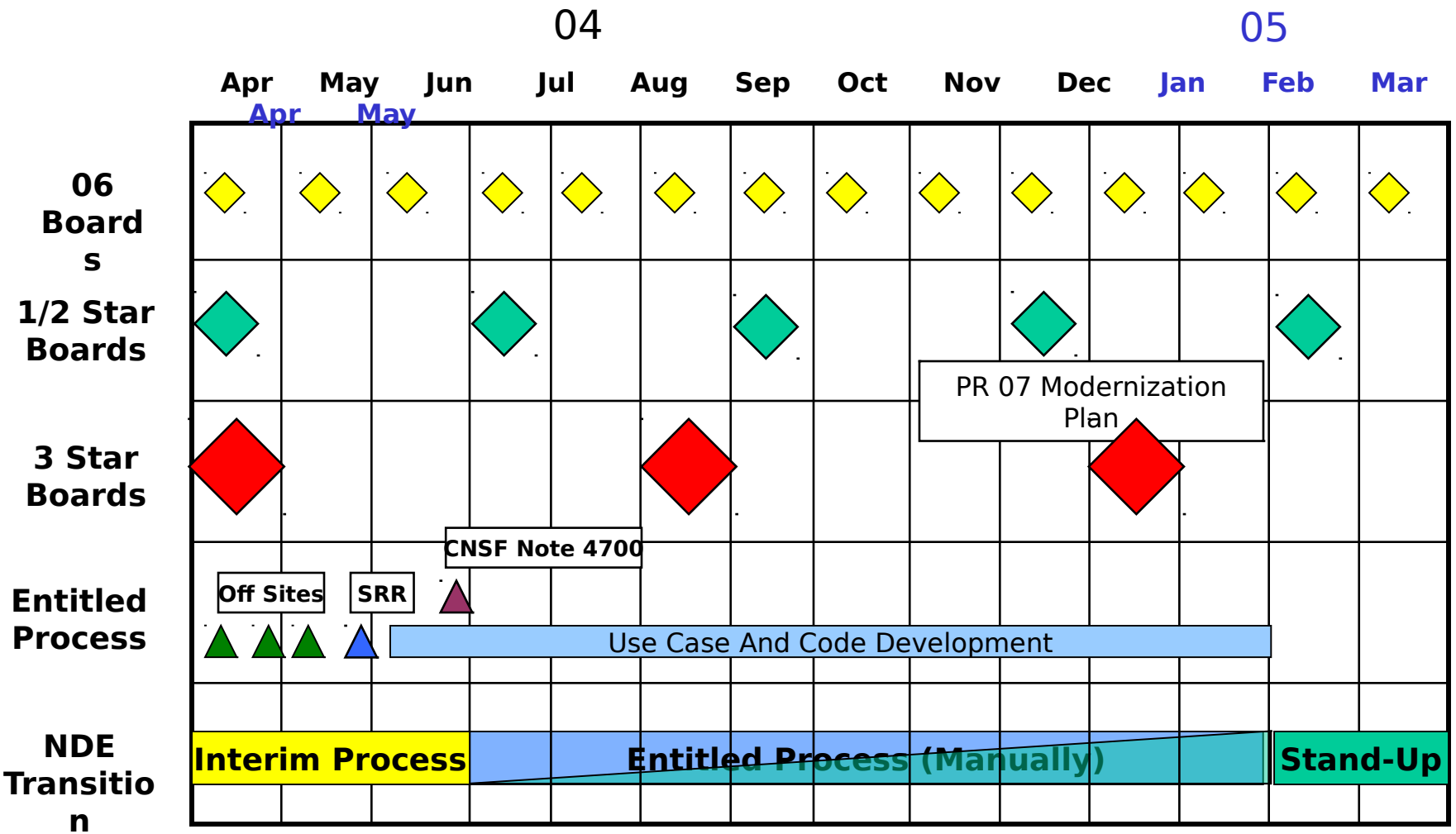
NDE-NM Development Update

- Entitled Modernization Process (MP) transitioning to a ongoing process (Manual initially).
- Efforts ongoing to clarify the Entitled Process and develop New Business Rules.
- As the authoritative database, NDE needs to evolve to support the Entitled MP
- Need to automate, and correct performance / integrity issues.
- Current activity to:
  - ✓Establish objectives and needs;
  - ✓Provide concurrence/comments with respect to MP;
  - ✓Understand how dollars are to be spent in support of automating process;

CFT 4 NEAR TERM PLAN



CFT 4 Schedule – Long Term
(Entitled Process)



POM 06 Modernization Plan
(What's In, What's Out)

1558 ***Must Do***	• **High Figure of Merit (AFOM 5.5-7.0)** • **Approved at 1 / 2 Star Level for POM 06** • **Approved at 3 Star Level for POM 06** • **Cost Data by Appropriation and FY**
8585 ***Crunch***	• **Medium figure of Merit (5.5 > AFOM > 2.5)** • **Includes many "should do" items** • **57 Conjunctive Alts for "Must Do" Alts for POM 06** • **205 Reclamas for consideration for POM 06** • **Cost data only for 262 of 8585 items**
2783 ***Kill***	• **Low figure of Merit (AFOM 0 - 2.5)** • **Recommended at 1 / 2 Star Level to move to History** •**3 Star Board agreed to move to History** • **Old, outdated, low value** •**No cost data pursued**

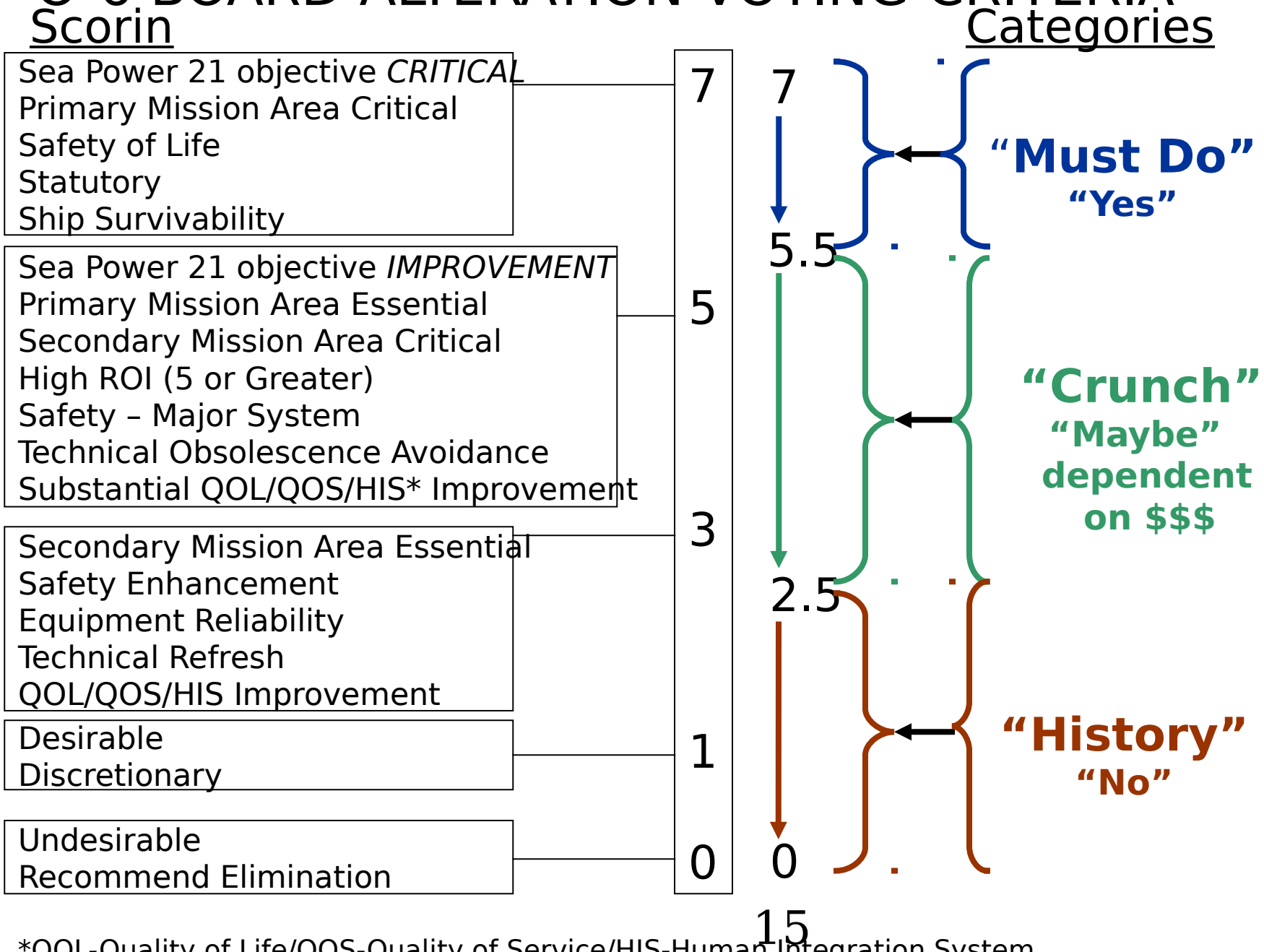
Subsequent Data Calls

- **Crunch Zone – 6278 items**
  - 663 provided cost data
  - 1123 indicated complete
  - 4492 provided no cost data
  - **TOTAL COST $233,727,451**
- **April/May Must Do – 799 items**
  - 270 provided cost data
  - 156 indicated complete
  - 373 provided no cost data
  - **TOTAL COST $109,013,787**
- **Kill Zone – 72 items**
  - 19 provided cost data
  - 30 indicated complete
  - 7 identified as “guarantee”, no cost to government
  - 16 provided no cost data
  - **TOTAL COST FY04 $1,113,000**
  - **TOTAL COST FY05 $1,927,043**

Limitations

- **FY 04 Not Pursued**
- **FY 05 Not Pursued**
- **FY 06 and out pursued only for “*Must Do*” and selected “*Crunch*” Zone (6 month effort)**
- **Cost and schedule numbers are “75% Solution”**
- **We pursued from ALT perspective, then compared to Program of Record**

O-6 BOARD ALTERATION VOTING CRITERIA



*QOL-Quality of Life/QOS-Quality of Service/HIS-Human Integration System

SPM VOTE (ALT READINESS)

- Business Case complete? (The Entitled Modernization will require a business case for each Alt):
  - Cost estimate
  - Cost avoidance
  - Projected savings
  - Return on Investment (ROI)
  - When benefits occur
  - Potential manning impact
  - Non-ship (DoD/USN) infrastructure support/interoperability (USN/Joint) requirements
  - Each Class/Ship impacted
  - Ship interface/impact
  - Total Human Systems Integration impact
- Concurrency with other Alts identified?
- Applicability to other classes identified?
- Risks Identified?
- All technical elements identified? e.g., Ship integration, topside analysis, weight/moment, distributed systems, etc.

SPECIFIC DATA CALL REQUIRMENTS

(1/9/04 and 3/10/04)

- The goal was to provide cost estimates, by appropriation, for years FY 06 -FY 11, that reflect the **total modernization budget** required to support the alterations voted "Must Do".
  - Responsible activities should provide Appropriation Type, i.e., R&D, OPN, OMN, APN, or WPN and applicable funding line(s).
  - Of some concern is the significant lack of RDT&E and Procurement funding identified in the data submitted to date. These two Accounts make up a little over $3 Billion in our estimated Ship Modernization Program of Record. As the Budget Lines that make up these Accounts tend to be explicitly targeted for specific projects, this disconnect between the funding identified via NDE and the spreadsheet implies one of three things.
    - Either the Budget Line is not needed as programmed.
    - The Budget Line costs should be included in NDE and the spreadsheet.
    - The costs should not be considered as Ship Modernization at all.
- Guidance for providing Cost Estimates:
  - 1. Design/Development includes, but may not be limited to: all upfront engineering costs to design and develop the equipment; associated testing; related technical documentation.
  - 2. Procurement/Test includes, but may not be limited to: all costs for procurement of equipment, including ILS, test plans, pre-installation tests and all related technical documentation.
  - 3. Install/Check-out includes, but may not be limited to: all costs for installing the equipment to include support, support and technical services and conducting all necessary check-outs.

DATA PROVIDED BY PMs AND PARMs

1. Fiscal Information – R&D, Procurement, Installation over FYDP
2. Schedule/Fielding Plan: Installation and year $ required
   - Data call was issued requesting “Must Do” alterations cost data by Alt
   - Totals reflect the modernization budget required to support the “Must Do” alts.
   - Itemized by Account and Budget Line Item.

Methodology To Estimate Approximate Modernization Costs

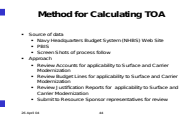
Alteration Prioritization

Cost & Schedule Data
NDE

Draft POM 06
Modernization Plan

PR 05
Program of Record
PBIS

Filter for Ship
Modernization with
Sponsor


Method for Calculating TOA

- Source of data
  - Navy Headquarters Budget System (NHBS) Web Site
  - PBIS
  - Screen S hots of process follow
- Approach
  - Review Accounts for applicability to Surface and Carrier Modernization
  - Review Budget Lines for applicability to Surface and Carrier Modernization
  - Review Justification Reports for applicability to Surface and Carrier Modernization
  - Submit to Resource Sponsor representatives for review

Derived PR 05
Modernization Plan
“Assets”

TIGER TEAM

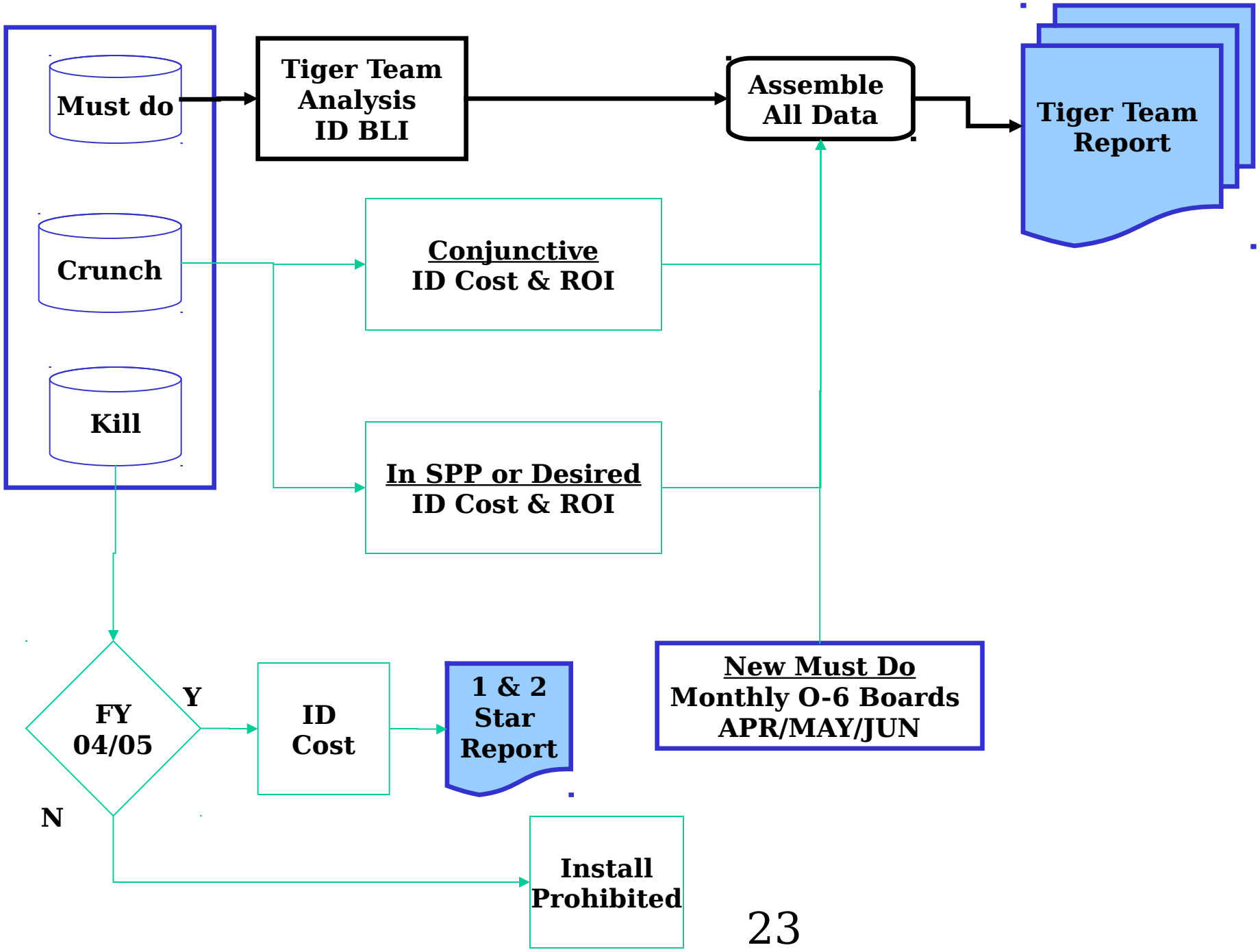
- Purpose
  - Create the POM 06 Modernization Plan
  - Align Funding with “Must Do” Alterations
  - Recapitalize if possible
- Tasking
  - Directed by 3 Star Board
  - Final Product due to N6/N7 B
- Action Required by
  - Resource Sponsors
  - Program Managers

Modernization Definition

Modernization funding consists of all efforts and costs that lead to any changes of an In-Service Surface Ship or Carrier with the single exception of changes within the nuclear propulsion boundaries. This includes all product development, procurement, and installation costs as well as costs that are not specific to particular alterations, but are required to execute the Modernization Program. Product development costs are generally paid for with R&D 6.3 and 6.4 funding. Procurement and installation costs may be paid for with OPN, WPN, APN, SCN, or OSMN.

Report Structure

RS	LI	PE	FY 06	FY 07	
Nx	ABC	X	X_6	X_7	
	ABC	Y	Y_6	Y_7	
	ABC	Z	Z_6	Z_7	
TOTAL	ABC		$\Sigma(i)_6$	$\Sigma(i)_7$	
MODN	ABC		$<\Sigma(i)_6$	$<\Sigma(i)_7$	
ALT	ABC		XX_6	XX_7	
Δ	ABC		Δ_6	Δ	Potential for RECAP


Must do
Crunch
Kill
Tiger Team Analysis ID BLI
Assemble All Data
Tiger Team Report
Conjunctive ID Cost & ROI
In SPP or Desired ID Cost & ROI
New Must Do Monthly O-6 Boards APR/MAY/JUN
FY 04/05
Y
N
ID Cost
1 & 2 Star Report
Install Prohibited

Details

- When
  - Data Input 12 May – 4 Jun
  - Data Scrub and Analysis 7 Jun – 11 Jun

- Where
  - Anteon Offices, 1100 New Jersey Ave, 5th Floor
  - POC – Doug Whalen
    - O – 202.756.3865
    - C – 703.966.4254
    - dwhalen@anteon.com

Results of O-6, 1 & 2 Star and 3 Star Review Boards

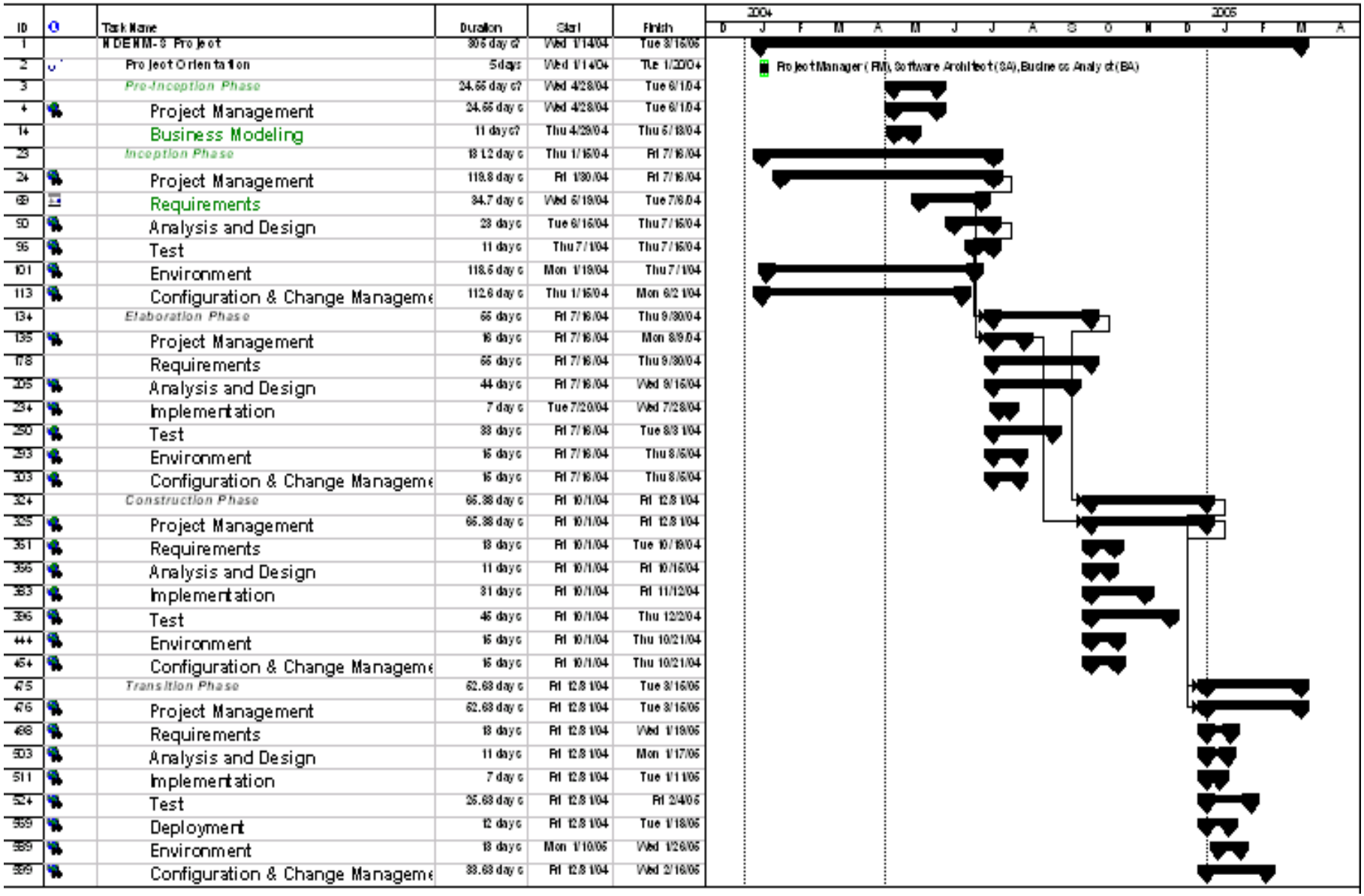
- Surface Ship POM 06 Modernization Plan Decisions (excludes FY 04/05)
  - "*Must Do*" (Highest Figure of Merit) items should be fully funded
  - "*Kill*" Zone alterations Killed
- Addressed the "Crunch" Zone (Mid-level Figure of Merit) items with respect to POM 06
  - 3 Star Board felt that more cost data was required for the "crunch zone" items and further review of the existing Budget Line Items needed to be accomplished.
  - 3 Star Board decided to meet to review additional cost data validation and "crunch" zone cost data inputs
    - 1/2 Star Board scheduled 23 June
    - 3 Star Board scheduled 1 July
- Recommended removing $100 M from FY 06 Modernization Budget
- Determine realignment requirement and submit to OPNAV N6/7 by 15 July (Approximately $368 M)
- Effort focused on Mapping the POM 06 MP requirements to OPNAV Budget.

What Next?

- 0-6 Review Board for June 17 will be for training only
  - No alterations to be reviewed
- Will forward cost data from Crunch Zone/April-May Must do's and Kill to resource sponsors for review/concurrence – 10 June
- Will forward items in the Crunch Zone with cost data to 0-6 Review Board for comments/concurrence – 10 June
- 1/2 Star Board (23 June) and 3 Star Board (1 July) will FINALIZE the POM 06 Modernization Plan
- 0-6 Review Boards for July and August will be same as usual (assignment of Figure of Merit), with the exception that cost data will be required for all submissions prior to review by the 0-6 Board
  - NDE CFC module will be modified to include cost data requirements
  - NDE SCD module will be provided to allow use of SCD for all new submissions as of mid July
- All new Candidates for Change submitted for review by the 0-6 Review Board as of September will require use of the Ship Change Document (SCD)

BACKUP SLIDES

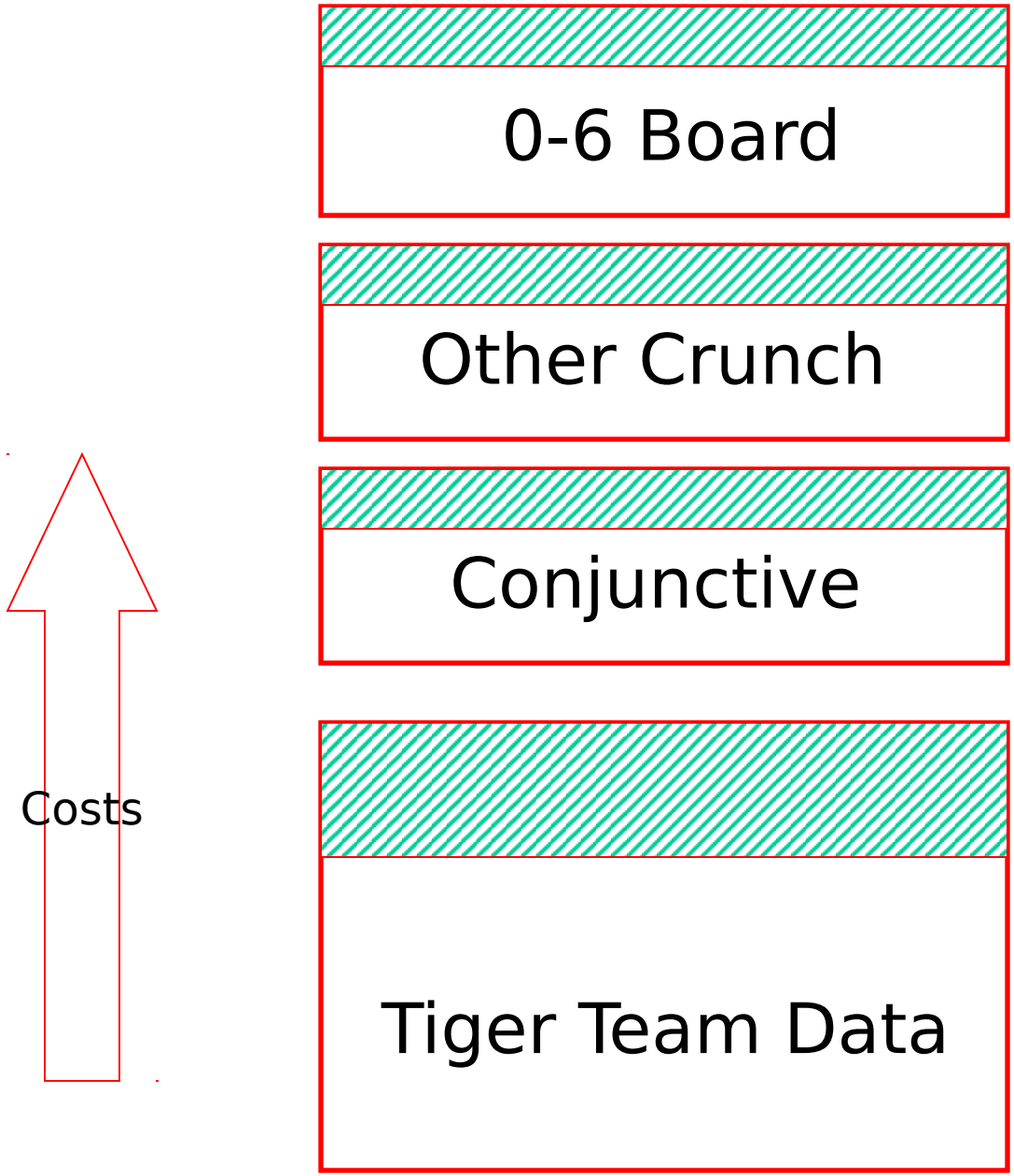
High Level POA&M for NDE

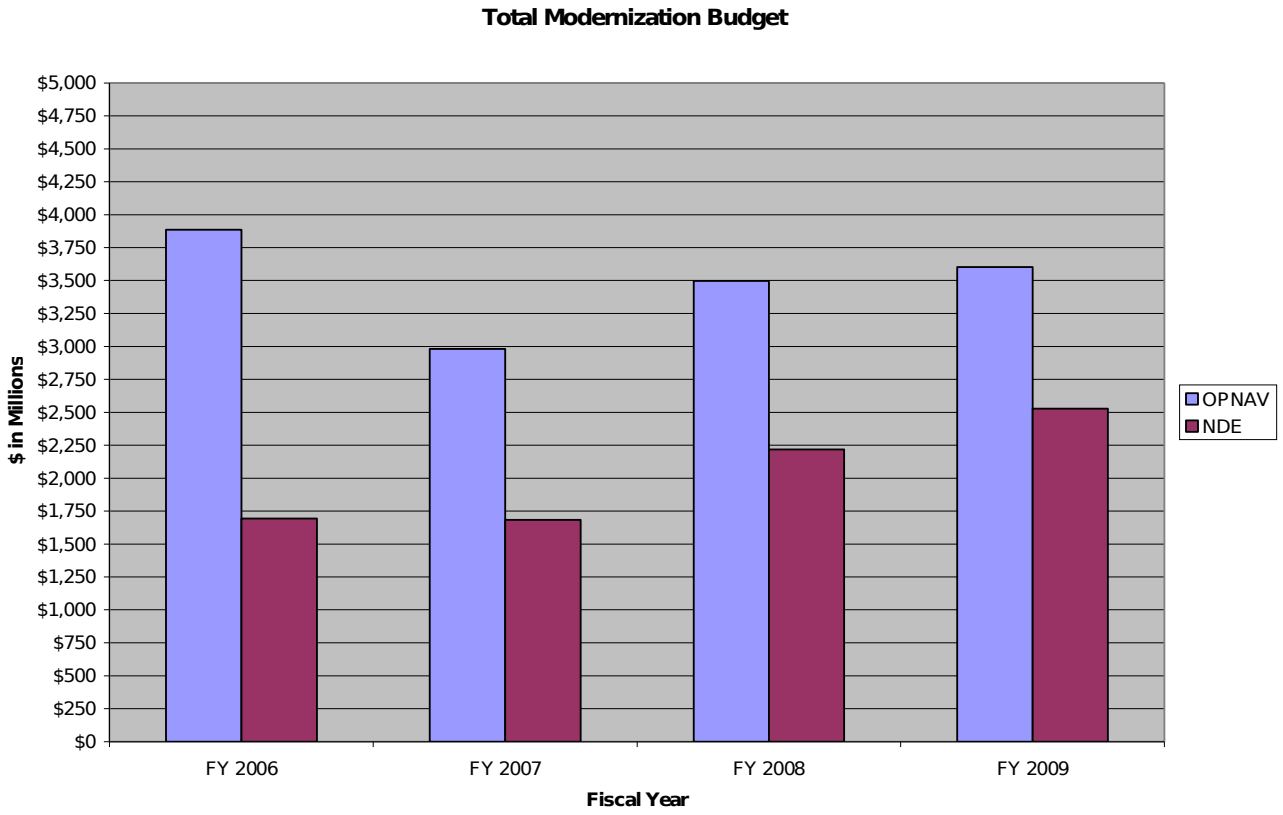


ID	Task Name	Duration	Start	Finish
1	NDE NM-S Project	306 days?	Wed 1/14/04	Tue 3/16/05
2	Project Orientation	5 days	Wed 1/14/04	Tue 1/20/04
3	*Pre-Inception Phase*	24.66 days?	Wed 4/28/04	Tue 6/1/04
4	Project Management	24.66 days	Wed 4/28/04	Tue 6/1/04
14	Business Modeling	11 days?	Thu 4/29/04	Thu 5/13/04
23	*Inception Phase*	18 1.2 days	Thu 1/15/04	Fri 7/16/04
24	Project Management	118.8 days	Fri 1/30/04	Fri 7/16/04
69	Requirements	84.7 days	Wed 5/19/04	Tue 7/6/04
90	Analysis and Design	23 days	Tue 6/15/04	Thu 7/15/04
96	Test	11 days	Thu 7/1/04	Thu 7/15/04
101	Environment	118.5 days	Mon 1/19/04	Thu 7/1/04
113	Configuration & Change Manageme	112.6 days	Thu 1/15/04	Mon 6/2 1/04
134	*Elaboration Phase*	65 days	Fri 7/16/04	Thu 9/30/04
135	Project Management	16 days	Fri 7/16/04	Mon 8/9/04
178	Requirements	65 days	Fri 7/16/04	Thu 9/30/04
205	Analysis and Design	44 days	Fri 7/16/04	Wed 9/15/04
234	Implementation	7 days	Tue 7/20/04	Wed 7/28/04
250	Test	33 days	Fri 7/16/04	Tue 8/3 1/04
293	Environment	15 days	Fri 7/16/04	Thu 8/5/04
303	Configuration & Change Manageme	15 days	Fri 7/16/04	Thu 8/5/04
324	*Construction Phase*	65.38 days	Fri 10/1/04	Fri 12/31/04
325	Project Management	65.38 days	Fri 10/1/04	Fri 12/31/04
361	Requirements	13 days	Fri 10/1/04	Tue 10/19/04
366	Analysis and Design	11 days	Fri 10/1/04	Fri 10/15/04
383	Implementation	31 days	Fri 10/1/04	Fri 11/12/04
396	Test	45 days	Fri 10/1/04	Thu 12/2/04
444	Environment	15 days	Fri 10/1/04	Thu 10/21/04
454	Configuration & Change Manageme	15 days	Fri 10/1/04	Thu 10/21/04
475	*Transition Phase*	62.63 days	Fri 12/31/04	Tue 3/16/05
476	Project Management	62.63 days	Fri 12/31/04	Tue 3/16/05
498	Requirements	13 days	Fri 12/31/04	Wed 1/19/05
503	Analysis and Design	11 days	Fri 12/31/04	Mon 1/17/05
511	Implementation	7 days	Fri 12/31/04	Tue 1/11/05
524	Test	25.63 days	Fri 12/31/04	Fri 2/4/05
559	Deployment	12 days	Fri 12/31/04	Tue 1/18/05
569	Environment	18 days	Mon 1/10/05	Wed 1/26/05
599	Configuration & Change Manageme	33.63 days	Fri 12/31/04	Wed 2/16/05

SRR W3's

WHAT	WHO	WHEN
Review current threshold levels for review board	Bob Stout	15 June
Determine a mech. to input programs/ capabilities into the Entitled Process	NAVSEA 04 OPNAV N61	31 July
Provide FTE requirements to support the Entitled Process to CAPT Pedersen	ALLCON	10 June (pre-PIT)
Provide Database functional allocation to SPAWAR	Billy Douglas	15 June
Reach Agreement on authoritative database (NDE) including transition plan	NAVSEA 04 (Pat Haney)	30 June
Validate AFOM – CBA tools	AFOM – CBA teams	30 June
Set up monthly program reviews with SRR team	CFT 4	1 June
Strawman resolution of SHIPMAIN – C5I processes	BRT 23	10 June (pre-PIT)
Define linkage with Acquisition Process – JI(s) process	Bob Stout	31 July


0-6 Board
Other Crunch
Conjunctive
Tiger Team Data
Costs


Total Modernization Budget
$5,000
$4,750
$4,500
$4,250
$4,000
$3,750
$3,500
$3,250
$3,000
$2,750
$2,500
$2,250
$2,000
$1,750
$1,500
$1,250
$1,000
$750
$500
$250
$0
$ in Millions
FY 2006
FY 2007
FY 2008
FY 2009
Fiscal Year
OPNAV
NDE